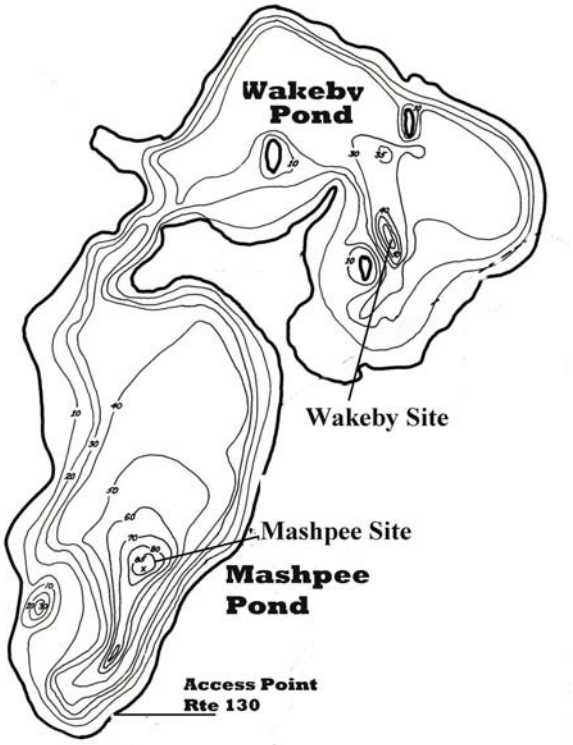
MASHPEE & WAKEBY LAKES MANAGEMENT COMMITTEE

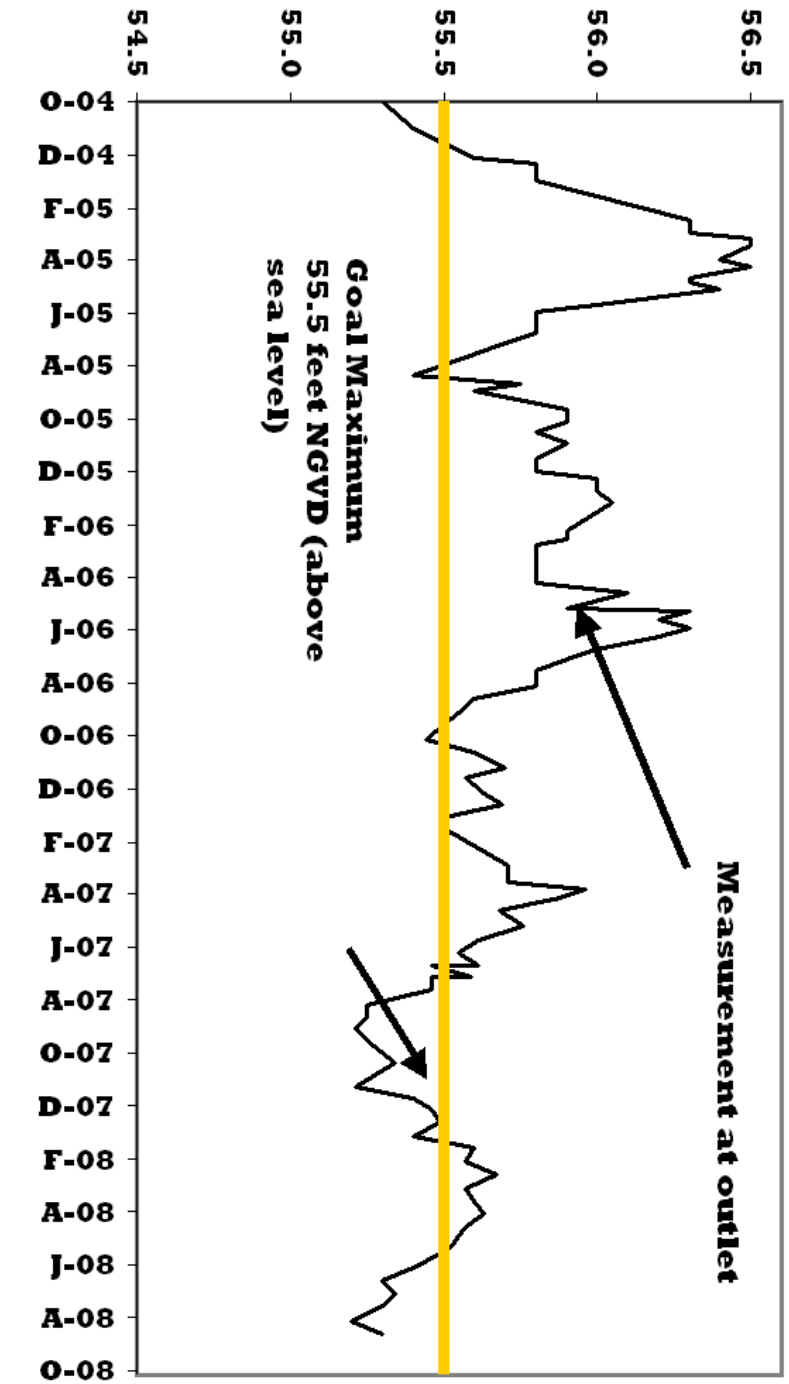
NEWSLETTER



VOL.8, Number 2, Fall 2008

"It is in man's heart that the life of nature's spectacle exists; to see it, one must feel it."
- Jean-Jacques Rousseau

If you are not currently on this Newsletter's Mailing List and wish to be added to it for future issues, please forward your request to any of the Lake Management Committee Members listed in this Newsletter.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Goal Maximum
55.5 feet NGVD (above
sea level)
Measurement at outlet

Pond Trophic Classification

The aging process for surface water bodies occurs over millennia and results from the accumulation of nutrients over time. This long-term process (many centuries) is rapidly accelerated by man caused impacts from the same items that are affecting our estuaries (Wastewater, runoff, fertilizers, etc)

The main classifications listed below are (sometimes subdivided into smaller increments) normally utilized to define existing status.

Oligotrophic lakes have very low levels of nutrients, very little organic material along the lake bottom, and high levels of dissolved oxygen near the bottom

Mesotrophic lakes are moderately enriched, and the natural processes of accumulation of sediments and growth of aquatic vegetation are occurring.

Eutrophic lakes are highly enriched with nutrients, have an accumulation of organic sediments, and low levels of dissolved oxygen in water near the lake bottom.

Scientific studies of North American water bodies aimed at assessing their aging status rely on one of several different available indices to assign one of these categories to a specific lake or pond. The table below is taken from the highly respected "Carlson Trophic Index" and is commonly utilized to assign pond ratings.

	Oligo-	**Meso-**	**Eu-**	
Indicator	**trophic**	**trophic**	**trophic**	**units**
Phosphorus	Less than12	12-24	Greater than 24	**µg/L**
Chlorophyll a	Less than 2.6	2.6-7.2	Greater than 7.2	**µg/L**
Secchi	Greater than 4	2-4	Less than 2	**Meters**

Pond Trophic Classification (continued)

Each year volunteers take spring/summer monthly water column readings and annually deliver water samples to the Cape Cod Commission/SMAST scientists for laboratory analysis at no charge as part of the "Pond and Lakes Stewards" (PALS) program.

The results for "near surface" sample analysis for 2002 through 2007 are listed in the table below. The reader is cautioned that these numbers present a single snapshot taken at a time of year when higher than annual-average readings can be anticipated and are not the average of a grouping. They do have value when viewed over time (years) to establish status and trend.

Year	Mashpee Phosphorus ug/L	Wakeby Phosphorus ug/L	Mashpee Chloro a ug/L	Wakeby Chloro a ug/L
2002	35.93	27.87	5.22	6.34
2003	9.29	30.97	3.75	5.6
2004	8.98	16.10	5.01	7.10
2005	9.27	12.36	5.43	5.29
2006	12.4	15.5	6.34	3.41
2007	11.9	15.1	2.15	7.9

ICEHOUSE ON THE LAKE

Years ago there was an ice house on Mashpee- Wakeby Lake. In those times most ice came from ponds and lakes the natural way. Year round homes, businesses and even summer cottages had an icebox for the warm season. In the winter, year round homes and businesses had a cooling room or box where meat, milk, butter and other things which needed to be kept cold, but not frozen, were stored.

Most lakes or large ponds had an icehouse. During the winter, ice was sawed from the lake and then dragged across to the icehouse where it was stored and covered with sawdust until needed**.** In those days a warm winter would mean that in the following summer ice had to be transported from the western part of the state or from the north in Vermont or New Hampshire, all at great additional cost.

Woods Hole had an example of a good size commercial ice operation on the Cape. Fishing boats used to come into the fish processing plant near the railroad station. The owner of the plant had crews that went out in the winter time and cut ice and stored it in his ice houses on nearby lakes. It was brought out when it was needed in warm weather to ice down the fishing boats and to pack the fish for shipment.
The ice cut and stored in the icehouse on Mashpee- Wakeby Lake was probably used by summer homes as well as by businesses in the Mashpee area. Independent icemen would have routes where they would deliver ice door to door in the summer. **In** those days, homes had a sign to put in the window on ice day. Depending on the color at the top of the sign that day, the iceman would know from the road if ice was needed and, if so, how much.

W Taylor, Lake Mgmt Committee

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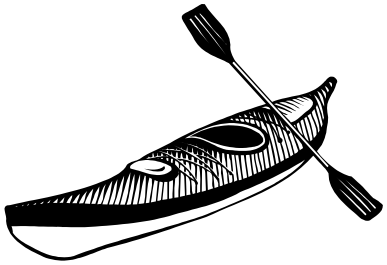


The Ice House on the Lake

<u>Purple Loosestrife (invasive)</u>

Purple Loosestrife (invasive)

DESCRIPTION

Purple loosestrife is an erect perennial herb in the loosestrife family, with a square, woody stem and opposite or whorled leaves. Leaves are lance-shaped, stalkless, and heart-shaped or rounded at the base. Plants are usually covered by a downy pubescence. Loosestrife plants grow from four to ten feet high, depending upon conditions, and produce a showy display of magenta-colored flower spikes throughout much of the summer. Flowers have five to seven petals. Mature plants can have from 30 to 50 stems arising from a single rootstock. It out competes and replaces native grasses, sedges, and other flowering plants that provide a higher quality source of nutrition for wildlife. The highly invasive nature of purple loosestrife allows it to form dense, homogeneous stands that restrict native wetland plant species. Purple loosestrife is capable of invading many wetland types, including freshwater wet meadows, tidal and non-tidal marshes, river and stream banks, pond edges, reservoirs, and ditches.

MANAGEMENT OPTIONS

Small infestations of young purple loosestrife plants may be pulled by hand, preferably before seed set.

Protect your pond!!!

Maintain well vegetated buffer zones

Avoid erosion

Mashpee Pond Water Column Measurements

Depth below Surface (Meters)	Dissolved Oxygen (Mg/L) July 2004	Dissolved Oxygen (Mg/L) July 2008	Temperature (Deg./C) July 2004	Temperature (Deg./C) July 2008
0.5	8.84	8.3	24.7	25.9
2.0	8.83	8.5	24.7	25.6
4.0	9.12	8.7	23.3	25.3
6.0	9.08	8.3	22.5	24.9
8.0	7.06	4.5	20.7	18.6
10.0	1.71	0.52	15.5	14.5
12.0	0.59	0.25	12.5	12.3
14.0	0.44	0.22	11	11.3
16.0	0.4	0.23	10.4	10.3
18.0	0.41	0.20	9.4	9.2
20.0	0.4	0.2	9	8.6
22.0	0.38	0.19	8.8	8.3
24.0	0.4	0.21	8.7	8.1
26.0	0.38	0.17	8.7	8.1
28.0	0.35	0.2	8.7	8.1
30.0	0.3	0.18	8.8	8.1

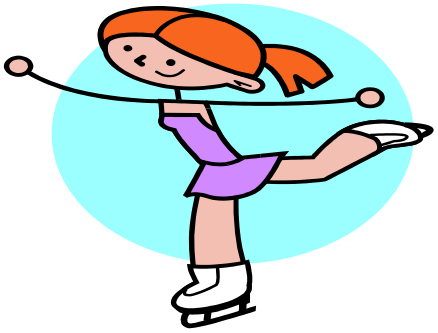
Deep ponds stratify because water attains maximum density at 39°F. It becomes less dense (lighter in weight) both above and below 39°F. Soon after the ice melts in the early spring, the water temperature throughout the pond rises to 32°F. As spring advances the surface waters warm quickly, causing the initial thermal stratification to develop. During summer, the temperature differential between the warm, upper layer (called the epilimnion) and the colder, bottom layer (the hypolimnion) increases. Normal summer wind and weather conditions cannot cause the two layers to mix, and the pond will remain stratified until fall. Between the epilimnion and hypolimnion is a relatively thin layer of water called the thermocline. This layer is characterized by a rapid decrease in temperature.

Boating Regulation Infractions

Mashpee and Wakeby Ponds provide multi-season recreational activities for residents and visitors year round. The ponds provide opportunities for enjoying pleasant restful surroundings for swimming, canoe/kayaking, sail and power boating, fishing and scuba diving. With winter ice, the fishing is joined by potentials for ice boating and skating.

These activities introduce the possibility for events where assistance from public safety organizations such as Police or Fire and Rescue are required. To notify these organizations of the need for emergency assistance the 911 system should be utilized.

Events that require enforcement of water/boating related regulations should be referred to the Harbormaster for resolution. In the case of a current, ongoing infraction the Harbormaster may be advised via the Mashpee Dispatch Office. Call the Police business line at 508-539-1480, ext 5 and a dispatcher will notify the appropriate responder. Please try to provide registration numbers where possible.



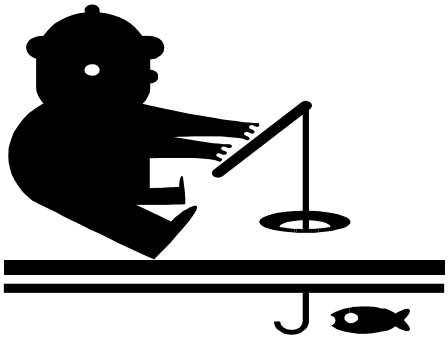
Safety First

“Time Flies” and before we can say “Jack Frost” we will be complaining about home heating expenditures and trying to shake the winter doldrums. Winter activities will include items such as ice fishing and skating and getting pets off dangerous pond ice.

We should all be aware of the inherent dangers posed by thin ice and act in a manner that does not pose a risk to potential rescuers or ourselves.

Even after the coldest periods ice can be too thin to support our weight due to internal currents under the surface and weak spots where warmer groundwater enters the ponds close to shore.

Don’t take unnecessary risks!



MASHPEE & WAKEBY LAKE MANAGEMENT COMMITTEE

MISSION STATEMENT

The Mashpee & Wakeby Lake Management Committee is comprised of five members from the Mashpee community. They are representative of groups within the Town of Mashpee who have a vested interest in maintaining the beauty and safety of the Lake for the residents' use and enjoyment. The Committee acts as a conduit for the public's interests and concerns about the Lake. It serves as liaison to the Town's governing agencies, recommending necessary actions to be taken. The Committee meets on the fourth Tuesday of each month, at 7:30 PM at the Mashpee Town Hall. The presence of Mashpee residents at these meetings is encouraged. We urge your participation in the activities of this Committee, to assist in our ongoing efforts to preserve the beauty and safety of the Lake. For more information, contact any of the Committee members listed below.

William Marsters Jr., Chairman — Lake Shore Property Owner 100 Lakewood Drive, Mashpee, MA 508-477-1750

William R. Taylor, Vice Chairman - Waterways Commission
31 Godfrey Road Mashpee, MA 508-477-6739
Email: nobsque@comcast.net

Barbara Nichols, Secretary- Lake Shore Property Owner
23 Melissa Ave, Mashpee, MA 508-539-1848
Email: barbnich@cape.com

George G. Bingham III
18 Bingham Drive Mashpee, MA 508-477-7141
Email: g.bingham3@verizon.net

Hans Fritschi — Lake Shore Property Owner
170 Pimlico Pond Road Mashpee, MA 508-539-3465
Email: hfritschi@alum.mit.edu

Mashpee-Wakeby Lake
Management Committee
Mashpee Town Hall
Mashpee, MA 02649